

September 12, 2001

Tom Jones
RMG Foundry, LLC d/b/a RMG Foundry
500 South Union Street
Mishawaka, Indiana 46544

Re: Significant Source Modification No:
141-14439-00007

Dear Mr. Jones:

RMG Foundry, LLC d/b/a RMG Foundry applied for a Part 70 Operating Permit on June 6, 1996 for gray and ductile iron foundry. An application to modify the source was received on June 1, 2001. Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

Two (2) Shellco 315 core machines, known as EU 7-8, equipped with an existing scrubber associated with the Laempe core machine, EU 7-4b for SO₂ control, exhausted in the core room, capacity: 5.0 tons of sand per hour, 140 pounds of epoxy resin per hour, and 70 pounds of SO₂ per hour, total. The core room raw material handling system transfers sand to EU 7-4a, EU 7-4b, EU 7-5 and EU 7-8.

The Significant Source Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3). If there are no changes to the proposed construction of the emission units, the source may begin operating on the date that IDEM receives an affidavit of construction pursuant to 326 IAC 2-7-10.5(h). If there are any changes to the proposed construction the source can not operate until an Operation Permit Validation Letter is issued.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter contact Mark L. Kramer, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 1-800-451-6027 (ext 631-691-3395).

Sincerely,

Original signed by Paul Dubenetzky

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

MLK/MES

cc: File - St. Joseph County
U.S. EPA, Region V
St. Joseph County Health Department
Northern Regional Office
Air Compliance Section Inspector - Rick Reynolds
Compliance Data Section - Karen Nowak
Administrative and Development - Janet Mobley
Technical Support and Modeling - Michele Boner

PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

**RMG Foundry, LLC, d/b/a RMG Foundry
500 South Union Street
Mishawaka, Indiana 46544**

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Source Modification No.: 141-14439-00007	
Original signed by Paul Dubenetzky Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: September 12, 2001

TABLE OF CONTENTS

A	SOURCE SUMMARY	4
A.1	General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.2	Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]	
A.3	Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.4	Part 70 Permit Applicability [326 IAC 2-7-2]	
B	GENERAL CONSTRUCTION CONDITIONS	5
B.1	Definitions [326 IAC 2-7-1]	
B.2	Effective Date of the Permit [IC13-15-5-3]	
B.3	Revocation of Permits [326 IAC 2-1.1-9(5)] [326 IAC 2-7-10.5(i)]	
B.4	Significant Source Modification [326 IAC 2-7-10.5(h)]	
C	GENERAL OPERATION CONDITIONS	6
C.1	Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]	
C.2	Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [325 IAC 1-6-3]	
C.3	Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]	
C.4	Opacity [326 IAC 5-1]	
C.5	Fugitive Dust Emissions [326 IAC 6-4]	
C.6	Operation of Equipment [326 IAC 2-7-6(6)]	
C.7	Stack Height [326 IAC 1-7]	
C.8	Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]	
C.9	Compliance Requirements [326 IAC 2-1.1-11]	
C.10	Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]	
C.11	Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]	
C.12	Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]	
C.13	Compliance Monitoring Plan - Failure to Take Response Steps	
C.14	Emergency Provisions [326 IAC 2-7-16]	
C.15	Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]	
C.16	General Record Keeping Requirements [326 IAC 2-7-5(3)]	
C.17	General Reporting Requirements [326 IAC 2-7-5(3)(C)]	
D.1	FACILITY OPERATION CONDITIONS - Two (2) Shellco Core Machines, EU 7-8	14
	Emission Limitations and Standards [326 IAC 2-7-5(1)]	
D.1.1	Particulate Matter (PM) [326 IAC 6-1]	
D.1.2	Particulate Matter (PM) and PM ₁₀ [326 IAC 2-2]	
D.1.3	SO ₂ [326 IAC 2-2]	
D.1.4	VOC [326 IAC 8-1-6]	
D.1.5	Preventive Maintenance Plan [326 IAC 2-7-5(13)]	
	Compliance Determination Requirements	
D.1.6	Testing Requirements [326 IAC 2-7-6(1,6)] [326 IAC 2-1.1-11]	
D.1.7	Particulate Matter (PM)	
D.1.8	Sulfur Dioxide (SO ₂)	

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

- D.1.9 Visible Emissions Notations
- D.1.10 Parametric Monitoring
- D.1.11 pH of the Scrubbing Liquor
- D.1.12 Scrubber Flow Switch
- D.1.13 Scrubber Inspection
- D.1.14 Failure Detection
- D.1.15 Cartridge Filter Inspection

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

- D.1.16 Record Keeping Requirements
- D.1.17 Reporting Requirements

Certification	18
Quarterly Report	19

SECTION A

SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a stationary source.

Responsible Official:	Tom Jones
Source Address:	500 South Union Street, Mishawaka, Indiana 46544
Mailing Address:	500 South Union Street, Mishawaka, Indiana 46544
General Source Phone Number:	219 - 256 - 4292
SIC Code:	3321
County Location:	St. Joseph
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

Two (2) Shellco 315 core machines, known as EU 7-8, equipped with an existing scrubber associated with the Laempe core machine, EU 7-4b for SO₂ control, exhausted in the core room, capacity: 5.0 tons of sand per hour, 140 pounds of epoxy resin per hour, and 70 pounds of SO₂ per hour, total. The core room raw material handling system transfers sand to EU 7-4a, EU 7-4b, EU 7-5 and EU 7-8.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source modification does not include any insignificant activities as defined in 326 IAC 2-7-1(21).

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Definitions [326 IAC 2-7-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)] [326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.4 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (e) In the event that the Part 70 application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:
 - (1) If the Part 70 draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Part 70 draft.
 - (2) If the Part 70 permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go through a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Part 70 permit at the time of issuance.
 - (3) If the Part 70 permit has not gone through public notice, but has not gone through final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Part 70 permit, and the Title V permit will be issued after EPA review.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)(C)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.
- (c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) when operation begins, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The

records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary alternative opacity limitations), opacity shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided by statute or rule, or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.7 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

Testing Requirements [326 IAC 2-7-6(1)]

C.8 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]

- (a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (b) The Permittee shall notify IDEM, OAM of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.11 Maintenance of Emission Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the emission monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this permit until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less often than once an hour until such time as the continuous monitor is back in operation.

- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.12 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.13 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the documents in which the information is found. The elements of the compliance monitoring plan are:
 - (1) This condition;
 - (2) The Compliance Determination Requirements in Section D of this permit;
 - (3) The Compliance Monitoring Requirements in Section D of this permit;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this permit; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:
 - (A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

- (B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps may constitute a violation of the permit.
- (c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.
- (f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

C.14 Emergency Provisions [326 IAC 2-7-16]

- (a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided in 326 IAC 2-7-16.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

- (1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;
- (2) The permitted facility was at the time being properly operated;
- (3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, Northern Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

Telephone Number: 219-245-4870 (Northern Regional Office)

Facsimile Number: 219-245-4877

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

- (A) A description of the emergency;
- (B) Any steps taken to mitigate the emissions; and
- (C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

- (6) The Permittee immediately took all reasonable steps to correct the emergency.
- (c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- (d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

- (e) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4-(c)(10) be revised in response to an emergency.
- (f) Failure to notify IDEM, OAQ, by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value.

Any operation shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.16 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are

available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.17 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

- (a) The reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

Two (2) Shellco 315 core machines, known as EU 7-8, equipped with an existing scrubber associated with the Laempe core machine, EU 7-4b for SO₂ control, exhausted in the core room, capacity: 5.0 tons of sand per hour, 140 pounds of epoxy resin per hour, and 70 pounds of SO₂ per hour, total. The core room raw material handling system transfers sand to EU 7-4a, EU 7-4b, EU 7-5 and EU 7-8.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.1.1 Particulate Matter (PM) [326 IAC 6-1]

Pursuant to 326 IAC 6-1, the particulate matter (PM) emissions from the core room raw material handling system associated with iso-set core machine, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b, the pep-set core machine, known as EU 7-5, and the two (2) Shellco core machine, known as EU 7-8, shall not exceed 0.03 grains per dry standard cubic foot.

D.1.2 Particulate Matter (PM and PM₁₀) [326 IAC 2-2]

- (a) The particulate matter (PM) emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shellco core machines, known as EU 7-8, shall not exceed a total of 5.02 pounds per hour, equivalent to 22.0 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.
- (b) The PM₁₀ emissions from the core room raw material handling system for the Laempe core machine, known as EU 7-4b and the two (2) Shellco core machines, known as EU 7-8, shall not exceed a total of 3.08 pounds per hour, equivalent to 13.5 tons per year. Compliance with this limit makes the requirements of 326 IAC 2-2 not applicable.

D.1.3 SO₂ [326 IAC 2-2]

The SO₂ emissions from the two (2) Shellco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, permitted by SSM 141-12444, issued on October 16, 2000, shall not exceed a total of 9.13 pounds per hour, equivalent to less than forty (40) tons per year and an overall minimum scrubber efficiency of 79.7%. Therefore, the requirements of 326 IAC 2-2 do not apply.

D.1.4 VOC [326 IAC 8-1-6]

- (a) The throughput of sand to the two (2) Shellco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, shall be limited to less than a total of 17,858 tons per twelve (12) consecutive month period.
- (b) The VOC emissions from the two (2) Shellco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, shall not exceed 2.80 pounds per ton of sand handled, equivalent to VOC emissions of less than twenty-five (25) tons per year in order to render the requirements of 326 IAC 8-1-6 not applicable.

D.1.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the two (2) Shellco core machines, known as EU 7-8, and their control devices.

Compliance Determination Requirements

D.1.6 Testing Requirements [326 IAC 2-7-6(1,6)] [326 IAC 2-1.1-11]

Within 60 days after re-directing the existing scrubber exhaust associated with Laempe core machine to the outside atmosphere, but no later than 180 days after re-directing the scrubber exhaust to the outside atmosphere, the Permittee shall perform SO₂ testing of the emission rate and scrubber efficiency utilizing Method 6 (40 CFR 60, Appendix A) for SO₂, or other methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. In addition to these requirements, IDEM may require compliance testing when necessary to determine if these facilities are in compliance.

D.1.7 Particulate Matter (PM)

The cartridge filters for PM control shall be in operation and control emissions from the core room raw material handling system associated with iso-set core machine, known as EU 7-4a, the Laempe LL 30 core machine, known as EU 7-4b, the pep-set core machine, known as EU 7-5, and the two (2) Shellco core machine, known as EU 7-8, at all times that these processes are in operation.

D.1.8 Sulfur Dioxide (SO₂)

The existing scrubber for SO₂ control shall be in operation and control emissions from the two (2) Shellco core machines, known as EU 7-8, at all times that the core machines are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.9 Visible Emissions Notations

- (a) Visible emission notations of the core room raw material handling system stack exhaust shall be performed during normal daylight operations when exhausting to the atmosphere once per shift. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

D.1.10 Parametric Monitoring

The Permittee shall record the total static pressure drop across the existing scrubber used in conjunction with the core machines, at least once per day when any of three (3) core machines are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range of 2.0 to 8.0 inches of water or shall be maintained within the range of inches of water specified by the manufacturer indicative of normal operations or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is below the above

mentioned range for any one reading. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.11 pH of the Scrubbing Liquor

The Permittee shall record the pH of the scrubbing liquor used in conjunction with the core machines, at least once per shift when the core machine processes are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pH shall be maintained between a range of 9 and 14 or the range of pH established during the latest stack test.. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pH reading is below the mentioned range for any one reading.

D.1.12 Scrubber Flow Switch

The Permittee shall record whether or not the scrubber flow switch used in conjunction with the scrubber controlling SO₂ emissions from the core machine is operating properly at least once per month. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the switch is not operating properly.

D.1.13 Scrubber Inspection

An inspection shall be performed each calendar quarter of the scrubber. Defective scrubber part(s) shall be replaced. A record shall be kept of the results of the inspection.

D.1.14 Failure Detection

In the event that a scrubber failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C). Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

D.1.15 Cartridge Filter Inspection

Daily inspections shall be performed to verify the placement, integrity and particle loading of the cartridge filters for the core room raw material handling system. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.16 Record Keeping Requirements

- (a) To document compliance with Condition D.1.4, the Permittee shall maintain records of the throughput of sand to the two (2) Shellco core machines, known as EU 7-8 plus throughput of sand to the Laempe core machine, known as EU 7-4b, on a monthly basis.
- (b) To document compliance with Condition D.1.9, the Permittee shall maintain records of the visible emission notations of the core room raw material handling system stack exhaust once per shift.

- (c) To document compliance with Condition D.1.10, the Permittee shall maintain the following:
 - (1) Daily records of the following operational parameters during normal operation when venting to the atmosphere:

Inlet and outlet differential static pressure.
 - (2) Documentation of the dates vents are redirected.
- (d) To document compliance with Condition D.1.11, the Permittee shall maintain the daily records of the pH of the liquor used in conjunction with the core machine operations.
- (e) To document compliance with Condition D.1.12, the Permittee shall maintain the monthly records of the check of the scrubber flow switch used in conjunction with the core machine operations.
- (f) To document compliance with Condition D.1.15, the Permittee shall maintain a log of the daily cartridge filter inspections and those additional inspections prescribed by the Preventative Maintenance Plan.
- (g) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.17 Reporting Requirements

A quarterly summary of the monthly information to document compliance with the sand throughput limit in Condition D.1.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH**

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: RMG Foundry, LLC, d/b/a RMG Foundry
Source Address: 500 South Union Street, Mishawaka, Indiana 46544
Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544
Source Modification No.: 141-14439-00007

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH**

Part 70 Source Modification Quarterly Report

Source Name: RMG Foundry, LLC, d/b/a RMG Foundry
Source Address: 500 South Union Street, Mishawaka, Indiana 46544
Mailing Address: 500 South Union Street, Mishawaka, Indiana 46544
Source Modification No.: 141-14439-00007
Facilities: Laempe (EU 7-4b) and two (2) Shellco Core Machines (EU 7-8)
Parameter: Sand Throughput
Limit: A total of 17,858 tons of sand per twelve (12) consecutive month period

YEAR: _____

Month	Sand Throughput (tons)	Sand Throughput (tons)	Sand Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

9 No deviation occurred in this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Mail to: Permit Administration & Development Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

RMG Foundry, LLC d/b/a RMG Foundry
500 South Union Street
Mishawaka, Indiana 46544

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____.
(Title) (Company Name)
3. By virtue of my position with _____, I have personal knowledge of the
(Company Name)
representations contained in this affidavit and am authorized to make these representations on behalf of
_____.
(Company Name)
4. I hereby certify that RMG Foundry, LLC d/b/a RMG Foundry, 500 South Union Street, Mishawaka, Indiana 46544, completed construction of the two (2) Shellco 315 core machines on _____ in conformity with the requirements and intent of the Part 70 Operating Permit modification application received by the Office of Air Quality on June 1, 2001 and as permitted pursuant to **Source Modification No. 141-14439-00007** issued on _____.
5. Additional facilities were constructed/substituted as described in the attachment to this document and were not made in accordance with the Construction permit.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature

Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of
Indiana on this _____ day of _____, 20 _____.

My Commission expires: _____.

Signature

Name (typed or printed)

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Part 70 Significant Source Modification

Source Name: RMG Foundry, LLC d/b/a RMG Foundry
Source Location: 500 South Union Street, Mishawaka, Indiana 46544
County: St. Joseph
SIC Code: 3321
Source Modification: 141-14439-00007
Permit Reviewer: Mark L. Kramer

On June 27, 2001, the Office of Air Quality (OAQ) had a notice published in the South Bend Tribune, South Bend, Indiana, stating that RMG Foundry, LLC d/b/a RMG Foundry had applied for a Significant Source Modification for two (2) core machines. The notice also stated that OAQ proposed to issue a Significant Source Modification for this operation and provided information on how the public could review the proposed Significant Source Modification and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this Significant Source Modification should be issued as proposed.

Upon further review, the OAQ has decided to clarify that this proposed modification regards the installation of two (2) Shalco cold box process core machines. The goal of making this change is to eliminate four (4) existing Gaylord or Harrison hot box process core machines. To make room for the installation of the Shalco machines, two (2) of the hot box machines will be removed immediately. The remaining hot box units will remain operable during the construction and during a conversion process.

Cores are made using patterns. The patterns for the hot box process and cold box process are different for the same part. RMG has thousands of such patterns. The typical pattern costs \$1500.00. Therefore, the process of converting all of the patterns will require time, both for reasons of cost and physically accomplishing the work. The reality of the situation is that, while both processes will exist in parallel for a short time, there will be no overlap because each process requires its own patterns. Underlying all of this is the fact that core making is a subprocess to the foundry operation. The two (2) operations are completely decoupled in terms of affecting each other's production rates. In fact, cores are usually made several days in advance of the casting operations taking place. No change in core making can change the overall capacity of the foundry or any of its other operations.

The above is a summary of all of the pertinent facts concerning this proposed modification. In addition, RMG has previously offered affirmative statements that this is simply a process change and that the change will have no effect on the capacity of the other foundry operations. RMG has also agreed to accept throughput limitations that limit the potential to emit of the operation.

Furthermore, to clarify RMG's position, they examined four (4) specific points and issued denials of the scenarios that IDEM, OAQ suggested as possibly increasing emissions as a result of this proposed modification.

Point 1. Purpose. Why is this change being made?

First the denials:

(a) It is not being done in response to new business.

- (b) It is not being done to attract new business.
- (c) It is not being done to support a new product.

Does it offer economic incentives? Yes. It will require less labor and less energy. (Note that the hot box process, as its name implies, employs heat to cure the cores. The cold box process does not use heat.)

On a more fundamental level, and this is strictly hypothetical, this could be a decision based on personal preference, like choosing chocolate or vanilla. It has been suggested that business does not operate on personal preference, that there must be an economic reason. Personal preferences are based on experience so the fact that this foundry was recently sold is a pertinent factor. The new management team obviously prefers cold box to hot box. This may be because they are more familiar with cold box, or because they have had negative experiences with hot box. Regardless of the reason, the experience of the new management team leads to the perception that there is economic justification for making the change.

Point 2. Efficiency

Efficiency has many definitions, which all in essence mean getting more for less. There will be less fuel usage, and correspondingly, less pollutants emitted. There will be less labor required. In this context the process is more efficient for both cost and reducing pollution.

RMG was asked to comment on the proposition that an increase in efficiency is equivalent to an increase in production rate. This concept is based on erroneous logic. Presumably the logic is that a new process that is more efficient would produce more "good" cores and less "bad" cores, then there would be more "good" cores per hour. However, the material throughput and emission rates are a function of total cores attempted, not "good" cores produced. Therefore, on an hourly basis the emission rate would be the same. For a given number of "good" cores produced the emission rate would be lower using the new process.

This argument can be extended to pouring and cooling operations as well. If a "good" core produces a "good" casting and a "bad" core produces a "bad" casting, then the hourly casting production and emission rates remain constant, but the number of "good" castings produced per hour increases. In terms of actual emissions, the number of total castings produced to make enough "good" castings to fulfill the actual number of castings ordered would be less, and, therefore, the resulting emissions will decrease proportionately. In the case of casting operations, the reduction of emissions is multiplied because reworking a "bad" casting requires repeating the preheat and melting processes as well as the pouring and cooling processes.

Point 3. Downtime/Changeover

The implication of questioning this aspect of the proposed equipment is that less downtime or faster changeovers will allow the source to produce more cores.

As explained above, the core making and casting operations are completely decoupled and have no bearing on each other's rate of production. Emissions from core making are a function of throughput only, so production rate is not a determinate of emissions. The only possible relationship between downtime/changeover improvements and emissions would be in potential to emit, but since RMG has already agreed to accept an annual throughput limit, this possibility is moot.

Point 4. Quality

Improved quality is a desired outcome of any change in production methods. The operative question here is does it have any effect on emissions. If quality is defined as “good” versus. “bad”, see the discussion under Efficiency, above. If quality is “good” versus. “better”, the change would be seen as less cleaning and finishing of the resulting castings. Logically, this would decrease the emissions from these activities, but there are no emission factors available to quantify these changes.

In summary, This process change will:

- (a) Create no new emissions
- (b) Eliminate combustion emissions from curing of hot box cores
- (c) Eliminate emissions due to rework of defective castings due to cores
- (d) Reduce emissions from cleaning and finishing operations

Therefore in light of the above clarification, IDEM has concluded that these two (2) core machines will not increase the overall plant capacity or utilization of other plant processes. Thus since there is no increase in utilization, the requirements of 326 IAC 2-2 are not applicable.

Upon further review, the OAQ has decided to make the following changes to the Significant Source Modification: The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language is **bolded**):

Change 1:

The overall minimum control efficiency required to render the requirements of 326 IAC 2-2 not applicable has been added to Condition D.1.3 as follows:

D.1.3 SO₂ [326 IAC 2-2]

The SO₂ emissions from the two (2) Shellco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, permitted by SSM 141-12444, issued on October 16, 2000, shall not exceed a total of 9.13 pounds per hour, equivalent to less than forty (40) tons per year **and an overall minimum scrubber efficiency of 79.7%**. Therefore, the requirements of 326 IAC 2-2 do not apply.

Change 2:

Condition D.1.4 has been divided into two (2) parts: the first stating the throughput limit and the second stating the emission limit as follows:

D.1.4 VOC [326 IAC 8-1-6]

- (a) The throughput of sand to the two (2) Shellco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, shall be limited to less than a total of 17,858 tons per twelve (12) consecutive month period.

- (b) ~~The coupled with a VOC emissions~~ **s from the two (2) Shellco core machines, known as EU 7-8, and the Laempe core machine, known as EU 7-4b, factor shall** not to exceed 2.80 pounds per ton of sand handled, equivalent to VOC emissions of less than twenty-five (25) tons per year in order to render the requirements of 326 IAC 8-1-6 not applicable.

Change 3:

Condition D.1.12 has been clarified to require that the Permittee shall record whether or not the scrubber flow switch used in conjunction with the scrubber controlling SO₂ emissions from the core machine are operating properly at least once per month as follows:

D.1.12 Scrubber Flow Switch

The Permittee shall record whether or not the scrubber flow switch used in conjunction with the scrubber controlling SO₂ emissions from the core machine **is operating properly** at least once per month. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the switch is not operating properly.

Change 4:

All references to the Compliance Data Section have been changed to Compliance Branch throughout the entire permit.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification

Source Background and Description

Source Name:	RMG Foundry, LLC d/b/a RMG Foundry
Source Location:	500 South Union Street, Mishawaka, IN 46544
County:	St. Joseph
SIC Code:	3321
Operation Permit No.:	T 141-6087-00007
Operation Permit Issuance Date:	Not yet issued
Significant Source Modification No.:	SSM 141-14439-00007
Permit Reviewer:	Mark L. Kramer

The Office of Air Quality (OAQ) has reviewed a modification application from RMG Foundry, LLC d/b/a RMG Foundry, formerly Atchison Indiana, LLC d/b/a RMG Foundry, Dodge - Reliance Electrical Industrial Company and Rockwell Automation/Dodge Mishawaka Facility relating to the construction and operation of the following emission units and pollution control devices:

Two (2) Shellco 315 core machines, known as EU 7-8, equipped with an existing scrubber associated with the Laempe core machine, EU 7-4b for SO₂ control, exhausted in the core room, capacity: 5.0 tons of sand per hour, 140 pounds of epoxy resin per hour, and 70 pounds of SO₂ per hour, total. The core room raw material handling system transfers sand to EU 7-4a, EU 7-4b, EU 7-5 and EU 7-8.

History

On June 1, 2001, RMG Foundry, LLC d/b/a RMG Foundry submitted an application to the OAQ requesting to add two (2) additional core machines to their existing plant. The Title V Operating Permit for this source has not been issued. This modification will be incorporated into that Title V, Part 70 Operating Permit prior to issuance.

Existing Approvals

The source applied for a Part 70 Operating Permit T 141-6087-00007 on June 6, 1996. The source has been operating under previous approvals including, but not limited to the following:

St Joseph County

- (a) Registration No. D 1 123, issued January 6, 1993 and January 6, 1997.
- (b) Registration No. D 1 132, issued January 6, 1993 and January 6, 1997.
- (c) Registration No. D 1 135, issued January 6, 1993 and January 6, 1997.
- (d) Registration No. D 1 136, issued January 6, 1993 and January 6, 1997.

- (e) Registration No. D 1 137, issued January 6, 1993 and January 6, 1997.
- (f) Registration No. D 1 139A, issued January 6, 1993 and January 6, 1997.
- (g) Registration No. D 1 158, issued January 6, 1993 and January 6, 1997.
- (h) Registration No. D 1 160, issued January 6, 1993 and January 6, 1997.
- (i) Registration No. D 1 161, issued January 6, 1993 and January 6, 1997.
- (j) Registration No. D 1 162, issued January 6, 1993 and January 6, 1997.
- (k) Registration No. D 1 166, issued January 6, 1993 and January 6, 1997.
- (l) Registration No. D 1 171, issued January 6, 1995 and January 6, 1997.
- (m) Registration No. D 1 175, issued January 6, 1993 and January 6, 1997.
- (n) Registration No. D 1 176, issued January 6, 1993 and January 6, 1997.
- (o) Registration No. D 1 177, issued January 6, 1993 and January 6, 1997.
- (p) Registration No. D 1 188, issued January 6, 1993 and January 6, 1997.
- (q) Registration No. D 1 192, issued January 6, 1993 and January 6, 1997.

IDEM, OAQ

- (r) Registration CP 141-2548-00007, issued May 22, 1992.
- (s) Registration CP 141-2503-00007, issued September 28, 1992.
- (t) Registration CP 141-3115-00007, issued November 2, 1993.
- (u) Registration CP 3867-00007, issued September 20, 1994.
- (v) CP 141-4053-00007, issued January 13, 1995.
- (w) Exemption 141-4507-00007, issued May 11, 1995.
- (x) CP 141-4010-00007, issued August 30, 1995.
- (y) Exemption CP 141-5749-00007, issued July 17, 1996.
- (z) SSM 141-12444-00007, issued on October 16, 2000.
- (aa) AA 141-12919-00007, issued on December 1, 2000.
- (bb) SSM 141-13749-00007, issued on March 23, 2001.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

The scrubber exhausts inside the foundry building. There are no new stacks as a result of this modification.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 1, 2001.

Emission Calculations

See page 1 of 1 of Appendix A of this document for detailed emissions calculations.

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	5.91
PM ₁₀	5.91
SO ₂	329
VOC	61.3
CO	0.000
NO _x	0.000

HAPs	Potential To Emit (tons/year)
Isopropyl benzene (cumene)	9.42
TOTAL	9.42

Justification for Modification

- (a) The Part 70 Operating Permit is being modified through a Part 70 Significant Source Modification to a yet to be issued Part 70 Operating Permit because the potential to emit before controls of SO₂ from this modification exceeds twenty five (25) tons per year. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4). Note that VOC from this modification is limited to less than twenty-five (25) tons per year and therefore, this alone would not require a significant source modification.
- (b) Since the Part 70 Operating Permit for this source has not been issued yet, the approval of this Significant Source Modification will allow the source to construct and operate.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 1999 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	not reported
PM ₁₀	55.0
SO ₂	0.046
VOC	52.6
CO	1.34
NO _x	5.82
HAP (Lead)	1.69

County Attainment Status

The source is located in St. Joseph County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
Ozone	maintenance
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. St. Joseph County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD),

326 IAC 2-2 and 40 CFR 52.21.

- (b) St. Joseph County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	110
PM ₁₀	106
SO ₂	<105.0
VOC	<159
CO	12.0
NO _x	15.4

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of one hundred (100) tons per year or more, and it is one of the 28 listed source categories.
- (b) These emissions are based upon January 21, 1999 version of the AIRS Quick Look Report plus the potential to emit after controls and applicable limits documented in the TSD for 141-12444, issued on October 16, 2000 plus those from 141-13749, issued on March 23, 2001.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Pollutant	PM (tons/yr)	PM ₁₀ (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO _x (tons/yr)
Proposed Modification	less than 22.0	less than 13.5	less than 40	less than 25.0	0.00	0.00
PSD Significant Level	25	15	40	40	100	40

- (a) This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.
- (b) The input VOC is limited to less than twenty-five (25) tons per year, therefore, the BACT

requirements of 326 IAC 8-1-6 do not apply. This VOC emission limit is equivalent to a sand throughput limit of less than 17,858 tons of sand per twelve (12) consecutive month period for the proposed modification and the modification which added the Laempe core machine permitted by 141-12444, issued on October 16, 2000.

- (c) The potential to emit (PTE) of sulfur dioxide (SO₂) decreased from 328 to 0.657 tons per year by use of the existing wet scrubber as a control device and further by impose the sand throughput limit to 0.268 tons per year. The PTE is therefore less than the forty (40) tons per year.
- (d) The potential to emit PM and PM₁₀ has been limited to less than twenty -five (25) and fifteen (15) tons per year, respectively to render the requirements of 326 IAC 2-2 not applicable.

The following table summarizes the proposed modification to the existing source as well as those modifications issued within the past twelve (12) months which includes the emissions after controls and limits from the equipment permitted by 141-12444, issued on October 16, 2000 and 141-13749, issued on March 23, 2001.

Pollutant	PM (tons/yr)	PM ₁₀ (tons/yr)	SO ₂ (tons/yr)	VOC (tons/yr)	CO (tons/yr)	NO _x (tons/yr)
Proposed Modification (14439)	Less than 22.0	Less than 13.5	less than 40.0	less than 25.0	0.00	0.00
Issued Modification (12444)					0.00	0.00
Issued Modification (13749)	2.94	1.44	0.000	4.91	0.000	0.350
Total Net Emissions	less than 25	less than 15	less than 40.0 ⁽¹⁾	less than 25.0 ⁽²⁾	0.00	0.350
PSD Significant Level	25	15	40	40	100	40

- (1) The total SO₂ emissions from the current proposed modification and the modification under 141-12444 are limited to less than forty (40) tons per year to render the requirements of 326 IAC 2-2 not applicable. The existing wet scrubber shall be in operation at all times any of the three (3) core machines are in operation.
- (2) The total VOC emissions from the current proposed modification and the modification under 141-12444 are limited to less than twenty five (25) tons per year due to the combined, total sand throughput limit of 17,858 tons of sand per year.
- (3) The PM and PM₁₀ emissions from the core room raw material handling system for the Laempe core machine and the two (2) Shellco core machines are limited to less than 22.0 and 13.5 tons per year, respectively to render the requirements of 326 IAC 2-2 not applicable.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source has submitted their Part 70 (T 141-6087-00007) application on June 6, 1996. The two (2) core machines being reviewed under this permit shall be incorporated in the submitted Part 70 application.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- (b) This modification does not involve a pollutant-specific emissions unit with the potential to emit after control in an amount equal to or greater than one hundred (100) tons per year. Therefore, the requirements of 40 CFR 64, Compliance Assurance Monitoring, are not applicable.
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20, 40 CFR Part 61 and 40 CFR Part 63) applicable to this proposed modification.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

- (a) In order to render the requirements of 326 IAC 2-2 not applicable, the outlet exhaust of the existing scrubber for SO₂ control for both the Laempe core machine, EU 7-4b, and the two (2) Shellco core machines, EU 7-8, shall not exceed an SO₂ emission rate of 9.13 pounds per hour, equivalent to less than forty (40.0) tons per year. This 9.13 pound per hour SO₂ emission rate requires an overall minimum control efficiency greater than seventy-nine and seven tenths percent (79.7%). The applicant has stated that the addition of these new core machines do not affect the potential to emit of any other facilities at this source.
- (b) In order to render the requirements of 326 IAC 2-2 not applicable, the PM and PM₁₀ emissions from the core room raw material handling system for the Laempe core machine and the two (2) Shellco core machines shall not exceed a total of 5.02 pounds per hour, equivalent to 22.0 tons per year and a total of 3.08 pounds per hour, equivalent to 13.5 tons per year, respectively.

326 IAC 2-4.1-1 (New source toxics control)

This modification is not subject to this rule since the limited single HAP is less than ten (10) tons per year and these core machines cannot produce finished product by themselves.

326 IAC 6-1 (Nonattainment area limitations)

Since St. Joseph County is listed in this rule and the potential PM emissions from the entire source are greater than one hundred (100) tons per year, those facilities not specifically listed in 326 IAC 6-1-18 are subject to a PM emission rate not to exceed 0.03 grains per dry standard cubic foot. The material handling system associated with EU 7-4a, EU-7b, EU 7-5 and EU 7-8 shall continue to meet the 0.03 grains per dry standard cubic foot of exhaust air allowable PM emission rate.

326 IAC 8-1-6 (New facilities: general reduction requirements)

This rule may apply to new facilities as of January 1, 1980. Although the potential VOC emissions from the two (2) Shellco core machines, known as EU 7-8, exceed twenty-five (25) tons per year, the source has agreed to limit throughput of sand to less than 17,858 tons per twelve (12) consecutive month period coupled with a VOC emission factor not to exceed 2.80 pounds of VOC per ton of sand handled, equivalent to less than twenty-five (25) tons of VOC per year.

Testing Requirements

Testing SO₂ emissions from the scrubber is not necessary under the proposed arrangement for the following reasons:

- (a) The scrubber will exhaust indoors.
- (b) At the proposed efficiency (79.7%) required to achieve compliance, the emissions from the scrubber would be over 100 ppm SO₂.
- (c) NIOSH describes sulfur dioxide as a "colorless gas with a characteristic, irritating and pungent odor." It also lists the IDLH (immediately dangerous to life and health) exposure level as 100 ppm.

Therefore, if the scrubber were not performing properly, the effect on workers in the area would be immediately noticeable. This situation is a much more effective way of assuring performance than a test once every five years. Thus, testing will be required only if the scrubber exhaust is redirected to the atmosphere.

Testing for VOC emissions is not necessary because the VOC emission were calculated from the formulation of the resins and assume that all of the VOC in these materials is emitted. Since this method calculates the maximum possible emissions, there are no assumptions that need to be verified by testing. The only "assumption" used in any of the emissions calculations in the permit application is the manufacturer's statement that 50% of the cumene is reacted in the mold. However, the sand tonnage limit imposed in the permit for VOC reduces the total potential usage of cumene below the ten (10) ton threshold, thus any "assumptions" made in the calculation do not effect whether they are a major source of HAPs.

The reality of the situation is that because the VOC are exposed to concentrated acid during molding, followed by concentrated caustic in the scrubber, most if not all of the VOC will be destroyed. However, because it is impossible to test for the actual emission rate, RMG Foundry is willing to report the maximum theoretical emissions for this process.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as

grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

- (a) The two (2) Shellco core machines, EU 7-8 have applicable compliance monitoring conditions as specified below:
- (1) The Permittee shall record the total static pressure drop across the scrubber controlling the core machines, at least once per day when any of the three (3) core machines are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range of 2.0 to 8.0 inches of water or within the range of inches of water as specified by the manufacturer selected indicative of normal operations or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.
 - (2) The Permittee shall record the pH of the scrubbing liquor controlling the core machines at least once per shift when the core machines are in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pH shall be maintained between a range of 9 and 14 or shall be maintained within the range of pH established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pH reading is below the above mentioned range for any one reading.
 - (3) The Permittee shall record whether or not the scrubber flow switch used in conjunction with the scrubber controlling SO₂ emissions from the core machines at least once per month. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the switch is not operating properly.
 - (4) Daily inspections shall be performed to verify the placement, integrity and particle loading of the cartridge filters for the core room raw material handling system. The Compliance Response Plan shall be followed whenever a condition exists which should result in a response step. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

These monitoring conditions are necessary because the scrubber and the cartridge filters for the core room material handling system must operate properly to ensure compliance with 326 IAC 2-2, 326 IAC 6-1 and 326 IAC 2-7 (Part 70).

- (b) The core room raw material handling system has applicable compliance monitoring conditions as specified below:

Visible emissions notations of the core room raw material handling system shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee will record whether emissions are normal or

abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

This monitoring condition is necessary because the filters for the core room material handling system must operate properly to ensure compliance with 326 IAC 2-2, 326 IAC 6-1 and 326 IAC 2-7 (Part 70).

Conclusion

The construction and operation of the two (2) Shellco core machines shall be subject to the conditions of the attached proposed Significant Source Modification No. 141-14439-00007.

Appendix A: Potential Emission Calculations

Company Name: RMG Foundry LLC d/b/a RMG Foundry
Address City IN Zip: 500 South Union Street, Mishawaka, Indiana 46544
Significant Source Modification: SSM 141-14439
Plt ID: 141-00007
Reviewer: Mark L. Kramer
Date: June 01, 2001

Throughput Limited to 17,858 tons of sand per year to render the requirements of 326 IAC 8-1-6 not applicable and this limit includes the sand for the Lampe Core Machine permitted by SSM 141-13749-00007, issued on March 23, 200

Emission Unit		7-7 Two Shellco Core Machines				Limited		
	Total		Uncontrolled	Uncontrolled		Controlled	Controlled	Controlled
	Maximum	Emission	Emission	Emission	Control	Emission	Emission	Emission
Pollutant	Rate	Factor	Rate	Rate	Efficiency	Rate	Rate	Rate
	(tons/hr)	(lbs/tons)	(lbs/hr)	(tons/yr)	(%)	(lbs/hr)	(tons/yr)	(tons/yr)
	of Sand							
PM	5.0	0.27	1.35	5.91	98.9%	0.015	0.065	0.0265
PM-10	5.0	0.27	1.350	5.913	98.9%	0.015	0.065	0.0265
SO ₂	5.0	15.00	75.00	328.50	99.8%	0.15	0.657	0.2679
NO _x	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	0.0000
VOC	5.0	2.80	14.00	61.32	0.0%	14.00	61.32	<25
CO	5.0	0.00	0.00	0.00	0.0%	0.00	0.00	0.0000
Isopropbenzene	5.0	0.43	2.15	9.42	0.0%	2.15	9.42	3.8395

Sand Usage 5.0 tons/hour

Resin Usage 1.4% of Sand or

SO₂ Usage 15 pounds/ton of sand or

140 pounds/hr
75 pounds/hr

Binder Epoxy/SO₂

	% Reacted	% Evaporated	% Remaining in Mold/Core
Cumene Hydroperoxide	90	0	10
Isopropylbenzene (cumene)	0	50	50

Only 10% of both resin is VOC, therefore VOC emission factor is 10% of 140 pounds/hr or 2.80 pounds/ton of sand

2.14 lbs/hr cumene = 5.89% by weight of Resin 4342 which is 52% of total & 50% is evaporated times resin use per hour (140 lbs/hr)